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105. Federal Communications Commission
BOB FM 93   Secretary

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Attention: **Bill Cline**

Company: **Federal Communations Commission**

Date: **Ocotber 29, 2004**

Fax #: **202-418-0187**

From: **Chris Reid Murray**

Phone #: _____

Re: **04-296**

Number of pages including this cover ___ **8** ___ . If you do not receive them all,
Please call me at (541) 484-9400.

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**Enclosed are comments filed on behalf of the proposed rule
making Docket EB 04-296.**

**These comments are being filed of behalf of the Oregon State
Communications Committee.**

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Filed comments regarding the rule making of EAS Rules. EB 04-296

Background:
My name is Chris Reid Murray. Since 1997, I have been the local chairperson of the Lane County LAECC. In 2000, I assumed the responsibility of the Oregon State S.E.C.C. I continue to chair that committee. I am also the author of the Lane Local EAS Plan, which was used as a template for other local EAS plans throughout Oregon. Since October of 2000 I have rewritten the Oregon State EAS Plan several times. Currently we are on Version 7.0

In September of 2003, we completed two years of planning and coordinated public safety officials and Oregon Broadcasters into implementing the Amber Plan. It went on line in October of 2003 and the first activation occurred in December. Since then we activated this plan 9 times, all with success. The effort that went into developing this plan galvanized the relationship between emergency management, law enforcement, and the broadcasting community unlike any other emergency communication system in the past. The activity of broadcasters to upgrade their EAS equipment was tremendous. Within six months, we had 100% of all the television broadcasters and 60% of radio broadcasters on line in the state of Oregon.

Lane County was the first local EAS Encoder unit installed in the state and developed a plan to use it. Since Amber was implemented, we have had 10 additional counties install EAS encoders. There have been two local emergencies activated by local law enforcement agencies since 1997. Both of these activations have had their problems.

In my position of being the EAS point person for the State of Oregon, I have had a lot of input, problems, ideas, and frustrations with the way the Emergency Alert System functions. I am keenly aware of the limitations of implementing an effective alerting system for our state. Many ideas have been proposed, discussed, tried and discounted.
Now that the FCC is asking for comments on how to make the EAS more efficient I will try to bring these ideas to the table. My comments address the following four areas of attention:

1. Text data displayed on television stations
2. Satellite television and radio
3. Local plans, and public safety input sources.
4. Local relay networks.
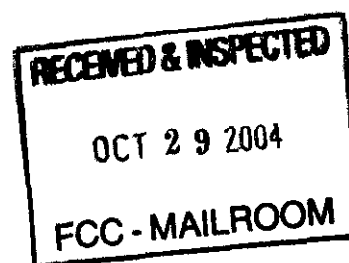
1. Text data displayed on Television screens:

Currently the rules require the protocol text that appears at the beginning of an EAS message be connected to a character generator that displays this protocol text across the television screens during an alert. Digital cable systems display this text for a fifteen-minute period and send a signal to the decoder boxes to switch to the channel broadcasting the emergency message. Only this protocol text is displayed. This method works well for weekly, and monthly testing, and for amber alerts. However, for local emergencies it creates more problems for law enforcement than it solves. I have an event that I would use as a text case example of why it causes problems.

Examples:

It was August of 2002 when fires were raging throughout the west. One fire in the Willamette National Forest 35 miles southwest of Eugene, Oregon, in the Cascade mountain range, was burning and threatened the small 640 person community of West Fir, Oregon. The Emergency Alert System was activated for an immediate evacuation. The Aural message stated, "The fire was 1000 feet from the homes, you need to evacuate now, you lives are in danger, and a shelter is in place at the nearby Oakridge High School". All the local media in the Oakridge / West Fir communities comes from the Eugene market via cable, and over the air translators. The activation was sent to all the Eugene media outlets, and they forwarded the emergency message. In the Eugene / Springfield community, an area of 250,000 persons, most heard the message but some were watching the television stations at work or in taverns and not listening. What they saw was a text crawling across their TV screens that displayed, "A Civil Authority has issued an immediate evacuation of Lane County etc." The local 911 operators were swamped with calls about why was the entire county being evacuated.

Another incident where the EAS was evacuated for a large barn fire displayed an immediate evacuation of Yamhill County.

Problem:

There is not, with the current EAS technology, a method by which the crawl can be accurate enough to inform the public as to what is actually happening. Several ideas have been proposed.

Possible Solutions:

1. Eliminate the Crawl. I believe that the idea here is to get the attention of television viewers to turn up their volume controls. Eliminating the crawl would not do that.

2. Replace the crawl with a message that states; "Emergency Message, please turn up your volume". This would help, but it is not the best solution.

3. Using the sub division feature of the current F.I.P.S. codes do not work either. The public cannot define which areas are being described.

4. Adding the ability to use postal "Zip" codes as F.I.P.S. codes to identify communities and portions of communities during an alert has been proposed. Although that would make the crawl more direct to the area, and would have helped the examples described, the programming, naming conventions, and the size of the database that would need to be stored in each EAS Encoder might be prohibitive.

5. Replace the crawl with text messaging. I believe this is the best idea. It would eliminate the protocol text from being displayed and replace it with text generated by the agency generating the emergency alert. The data would be entered via computer, converted to FSK and transmitted after the aural message and before the end of message tones. This burst of data would need to be transmitted by broadcasters so a limit on characters should be made. There are many advantages to this idea.
   a. Emergency evacuations such as the one used in my example could spell out that the community is being evacuated due to fire, proceed to the shelter.
   b. Amber Alerts can spell out the descriptions of the abductor, child, vehicle, and license plate number on the crawl.
   c. Civil emergencies can describe to the public what to do.

2. Satellite Radio and Television Stations:

It is estimated that of the citizens that obtain their television from other than "over the air" broadcasting that 25% of those now use satellite receivers. This is an expanding industry and unlike the cable industry, we have no methods of transmitting emergency alert messages to those subscribers. I believe there is.

Both the major satellite television companies have started to offer local broadcasters as part of their channel offerings. Local TV stations in hundreds of markets now transmit their television stations via satellite to the satellite companies. Customers can pay to receive their local media via their home satellite systems.

If the satellite companies are receiving the EAS messages via the local television stations then they have the ability to record that message, address all the satellite receivers within the F.I.P.S. codes used and require them switch to another channel one of their channels where the emergency message is being repeated for a fifteen-minute period. The viewer is then allowed to switch back to the channel they were watching but they would have the opportunity to hear the emergency message.

Satellite radio is much more difficult. As a nationwide system it would be difficult to address the radios. However, the local transmitters installed in large communities used for fill-in can help. They would be required to have EAS units installed that would respond to local and state emergencies.

3. Local Plans and the Primary Safety Input Sources.

Of all the problems with the emergency alert systems, local implantation is the most incomplete. We were required by mandate to transmit the president's message and create a network of monitoring assignments to accomplish it. By doing so the State of Oregon was allowed to tag along on the same network. Monthly Tests and Amber Alerts generated by the State's "Office of Emergency Management" have been about 90% effective. There have been some technical problems. Local activations however have created a large list of problems. We were not aware of how poorly local plans were in place until an incident that occurred in June of 2004.

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The mistake:
Due to the success of the Amber Alert System in Oregon and the knowledge that having an encoder present within your public safety domain, emergency managers began to realize that this gives you the power to broadcast emergency messages over all broadcast media. Broadcasters are aware that there is a state plan that gives them guidance as to what to expect and what is required of them. Unfortunately, the public safety sector is not aware of these requirements. This is what happened.

A new emergency manager went and purchased an EAS encoder for their 911-call center. They purchased the software package that went with it. She began to program all the possible scenarios she would be required to perform. Believing Amber Alerts to be the most popular, she created scenario's within the software to issue an Amber Alert for all of Oregon and Washington. She also believed that the unit was in the "Demo" mode and not the "Operate" mode, it was not. About 11:30 am she transmitted via radio link to the local primary an "Amber Alert" for all of Oregon and Washington with no audio. Testing it a second time she sent it out a second time within a five-minute period. Now calls are being generated throughout all of the Oregon Broadcast Community as over 400 broadcast stations and 400 cable companies are automatically forwarding this amber alert over their stations twice with no audio. Once the location of where the alert was being generated was found, she was called and informed that she was activating the Emergency Alert System over two states. She went "whoops", then to correct her mistake, she activated the system a third time. This time she included an audio message that said, "No Amber Alert, mistake I'm sorry". Three times the Emergency Alert System was activated states wide by mistake within a 20-minute period. Needless to say in my position I began to hear the complaints.

Resolution:
Once I had the opportunity to talk with the person that made the mistake she was very sorry for what happened, but I also came to the knowledge of how little she knew of the state and local EAS Plan in place. She was unaware of the following:

1. Amber Alerts are not generated locally. They are generated by the State Police who manages all these alerts as criminal investigations over multiple jurisdictional areas. Her knowledge that a neighboring county could also transmit them as well was her reason for implementing them in her area. The neighboring county is used in the state plan as a back-up source for the Salem office of emergency management in the event of equipment problems.

2. She was also not aware that by transmitting on the local relay network she was also transmitting to the state primary station, which then relayed the message over a two-state area.

3. She was also not aware of the state EAS plan that authorizes the EAS system to be used for local emergencies, and the presence of the Local EAS Plan for that operational area.

Assuming that the Emergency Alert System in the future will expand to include more and more public safety agencies with the ability to activate an alert, it became evident that we need to add more authority to local plans. Limit the number of EAS encoders within each operational area and require a method for training of local officials.

I met with state emergency management supervisors, discussed the mistake and the problems with security and was allowed to address all the 911 supervisors in Oregon with new concepts that we placed within the Oregon State EAS Plan.

Standardizing the Local Plan.

It became evident that local plans were as incomplete and different from one local operational area to another operational area. It became evident that local EAS alerts must be authorized by a local plan that has a standard template from area to area. We also realized that we needed to make the local plan as simple as possible.

From the success we have had with the Oregon state police northern command center, a state run 911 center, have had with generating Amber Alerts we came to the conclusion that smaller is better. The fewer number of EAS Encoder locations with a fewer number of trained personnel to operate the encoder, the better the system works.

The local plan does not need to duplicate any information that exists in the state plan. All it needs to do is describe the relationship between the communities public safety sector and the local broadcasting and cable communities. The basic structure of the plan comes down to two areas, the primary station(s) and primary public safety input sources.

The primary station(s) section is the "memorandum of understanding" known as the LP-1 agreement. It states that this station(s) has agreed to monitor these EAS sources and will forward these events.

Another "memorandum of understanding" establishes the "Primary Public Safety Input Source(s)" designates where the EAS encoders are located within each operational area and who will operate them. Instead of each agency having their own encoder, they pass on the information to the primary input agency. They have the following responsibilities:

1. They will respond to only the public safety agencies they have been listed in the local plan.

2. They will insure the security of who is making the request. In our local plan, as an example, the person making the request must have a rank a captain or higher. The 911 supervisors and emergency managers that handle the request personally know the people they are communicating with.

3. They will screen the emergency request to insure it meets the protocol of the state and local plans. It must be an emergency of a nature that by using the emergency alert system the result will be a positive and immediate result of the savings of life, health, or property.

In order for any public safety agency can begin to use an EAS encoder, they must be authorized by the local plan. With this requirement and designation status, keeping the personnel trained to use the equipment, and keeping them current with local and state EAS plans as they change become a more manageable.

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4. Local Relay Networks:

One of the weakest links of an effective Emergency Alerting System is the relay network methods used. When we were asked to establish a state relay network that would insure that every radio station in the state would be able to relay the president's message we were faced with several severe limits.

1. Oregon is a state that is divided twice by two mountain ranges, a costal mountain range that crosses the entire state north to south, and a volcanic ridge, 13,000 feet high that also crosses the state north to south and does not allow radio station's signals to transverse across them very well.
2. Oregon does not have any radio networks within the public safety areas that can cover every community in the state.
3. N.O.A.A. weather radio covers most of the state but does not have the ability to receive and forward state and locally coded EAS messages.
4. We did use Oregon Public Broadcasting (O.P.B.) as the state primary relay as they had the most coverage and a microwave network that covers about 70% of the states communities.

Although the corporation of O.P.B. is paramount to making our system work, when it came to funding required to "harden" their system, the local funding process did not understand why we required the money. We needed to rely on a "daisy-chain" of other stations to forward the messages from Oregon Public Broadcasting to other public radio and television outlets not covered by Oregon Public Broadcasting. In Southern Oregon as an example, seven counties rely on a donated 40-year-old tube based remote pick-up broadcast transmitter to relay the signal.

The problem is the funds are not present. Several attempts to find dollars from the local governments have failed. The Public Safety sector and the broadcast community are all aware of the importance of the Emergency Alert System and how effective it can be as a tool. However legislators cannot see spending money to improve systems that might get used five to six times per year. There have been several ideas presented to improve the state relay network and provide regional "hubs" that can be shared by multiple operational areas and jurisdictions.
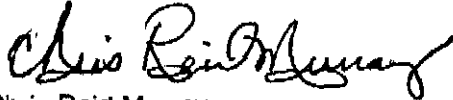
1. Expand NOAA weather radio into every community of the state and make it an "All Hazards" warning system. It would simplify monitoring assignments and would require a radio network so that each local primary input source has access to the network. Receiving the National Weather Service Radio isn't the main problem; it is the funds to connect the entire public safety sector to those transmitters. This sound like a grand solution, however, even these stations do not have redundancy, back-up power, and the infrastructure required to "harden" their systems.
2. Provide funds to build a regional relay radio network. Using high powered VHF repeaters, the public safety sector would have the ability to reach all broadcasters, cable, and satellite systems at the same time eliminating the daisy-chain of stations required to relay messages.
3. Provide funds for the existing radio relay networks to harden them, provide for redundancy and power.

These ideas will all work but the bottom line for any of them is this. They will at some time fail. It is very unlikely that more than one will fail at the same time.

It should be noted that if the Emergency Alert System is to be fully functional, and reliable in the time of most crises, money needs to be spent on what is now an
un-funded mandate. Putting all our eggs in one basket does not serve the public in times of crises. Multiple paths of delivering EAS messages from the public safety sector to the broadcasting and cable a community is a definite requirement for success.

Thank you for the opportunity to address these issues. I an a firm believer that the Emergency Alert System works to provide safety for our communities and should be greatly improved.

Sincerely,

Chris Reid Murray
Co-Char, Oregon State Emergency Communication Committee

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